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EXAMINER

VU, DAVID

ART UNIT PAPER NUMBER

2818

DATE MAILED: 01/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/710,489

Applicant(s)

HONER, KENNETH A.

Examiner

DAVID VU

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because there is no antecedent basis for “operational circuiting”. Correction is required. See MPEP § 608.01(b).

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: reference number “11” shown in the figures 6-9 is not described in the specification. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claims 12-22 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Regarding claim 12, it is not clear how the structure of claim 12 "being a released structure". A dependent product claim must contain all of the structural limitations of the independent claim. Due to the indefinite nature of claim 12, no art rejection has been applied.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. In claim 5:
  - a) How can structure of two layers have permeability rate?
  - b) It is being compared to an unknown parameter.
5. In claim 23, line 26, the language of "annealed" is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-5, 9, 11, 14-15 and 18-22 are rejected under 35 U. S. C. 102(b) as being anticipated by Tang et al (US 5,025,346).

Regarding claims 1-3, Tang et al, in related text (Col. 6, Line 55- Col. 7, Line 52) and figure (Fig. 4I) disclose a silicon structure 55 being positioned on a work piece 50 together with an operational circuitry 54 and being formed on top of a sacrificial layer 56.

Regarding claims 1-5, 9, 11, 14-15 and 18-22, the limitation "sputtered" or "annealed" or "wet etchant is selected from..." or "wherein said sputtered silicon structure comprises a post annealing ..." or " a maximum annealing temperature..." or " first sputtering criteria..." is taken to be a product by process limitation and consider non-limitation. In a product-by-process claim, it is the patentability of the claimed product and not of the recited process steps which must be established. Therefore, when the prior art discloses a product which reasonably appears to be identical with or only slightly different than the product claimed in a product-by process claim, a rejection based on sections 102 or 103 is fair. The Patent Office is not equipped to manufacture products by a myriad of processes put before it and then obtain prior art product and make physical comparisons therewith. In re Brown, 173 USPQ 685 (CCPA 1972). Also, a product by process claim directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ I S at 17 (footnote 3 ). See In re Fessman, 180 USPQ 324, 326 (CCPA 1974); In re Marosi et al., 218 USPQ 289, 292 (Fed. Cir. 1983); and particularly In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985), all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the process steps, which must be determined in a " product by process" claim, and not the patentability of the process. See also MPEP 2113. Moreover, an old and obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not.

Note that a "product by process" claim is directed to the product per se, no matter how actually

Art Unit: 2818

made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); In re Marosi et al, 218 USPQ 289; and particularly In re Thorpe, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above caselaw makes clear.

7. Claim 10 is rejected under 35 U. S. C. 102(b) as being anticipated by Yagi et al (US 5,658,698).

Regarding claim 10, Yagi et al, in related figure (Fig. 4K, 10L) disclose a silicon structure 14/16 being positioned on a work piece 1 together with an operational circuitry includes an aluminum-metalization 2/3 and being formed on top of a sacrificial layer 7.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6-8 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Tang et al (US 5,025,346) in view of Yao (US 5,578,976).

Tang et al. teaches all the limitations of the claims, but merely specifies that the sacrificial layer is made from an organic material such as polyimide. Yao, in related text (Col. 5, Lines. 18-19) disclose polyimide is used as the preferred sacrificial material. The use of conventional materials to perform their known functions in a conventional process is obvious. (In re Raner 134 USPQ 343 (CCPA 1962). Furthermore, as chemical composition of the protective layer does seem to be critical to the invention, it must be shown that any one or all of the listed materials yield an unexpected product or result. In re Margolis 228 USPQ 940 (Fed. Cir. 1986); In re Kirsch 182 USPQ 286 (CCPA 1974); In re Suether 181 USPQ 36 (CCPA 1974); In re Costello 178 USPQ 290 (CCPA 1973); In re Von Schickh 150 USPQ '300 (CCPA 1966); In re Sussman 60 USPQ 538 (CCPA 1944); In re Kaplan 45 USPQ 175 (CCPA 1940).

9. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang et al (US 5,025,346) in view of Mitchell(US 5,573,679).

Tang et al., disclose all claimed subject matter, but fails to expressly disclose the core layer and the conductive layer material. Mitchell et al., in related text, (Col. 4, Lines. 18-25) disclose wherein core layer includes silicon and conductive layer is sputtered from a material selected from a group consisting of TiN; and core layer having a first dissolving characteristic being compatible to a second dissolving characteristic of said at least one conductive layer. However, given the substantial Tang et al., in view of Mitchell, it would have been obvious to one with ordinary skill in the art at the time of the invention to allow the use of CVD processes throughout microphone fabrication. The use of conventional materials to perform their known

functions in a conventional process is obvious.

### Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Vu whose telephone number is (703) 305-0391. The examiner can normally be reached on Monday-Friday from 8:00am to 5:00pm. If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms., can be reached on (703) 308-4910.

DV

David Vu.



David Nelms  
Supervisory Patent Examiner  
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